**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1 (currently amended). A method of sharpening a digital image having image pixels according to its noise content, comprising the steps of:

~~a) providing an image sharpener having a variable parameter of sharpening;~~

~~b)~~ generating a noisy pixel belief map corresponding spatially to the image pixels having belief values indicating the likelihood that the modulation about respective pixels are due to system noise, said noisy pixel belief map being based upon both a local noise measure of pixels of the digital image and a noise table separate from said digital image; and

~~c)~~ using the noisy pixel belief map to vary ~~the~~ a variable parameter of ~~the~~ an image sharpener.

2 (currently amended). The method claimed in claim 1, wherein ~~the belief values in the noisy pixel belief map are derived from local signal to noise ratios~~ said local noise measure is local variance of the pixels and said noise table indicates expected variance of noise of the pixels.

3 (currently amended). ~~The method claimed in claim 1,~~ A method of sharpening a digital image having image pixels according to its noise content, comprising the steps of:

a) providing an image sharpener having a variable parameter of sharpening;

b) generating a noisy pixel belief map corresponding spatially to the image pixels having belief values indicating the likelihood that the modulation about respective pixels are due to system noise; and

c) using the noisy pixel belief map to vary the parameter of the image sharpener;

wherein the step of generating a noisy pixel belief map comprises the steps of:

b1) creating a low resolution version of the digital image;

b2) generating a low resolution noisy pixel belief map from the low resolution version of the digital image; and

b3) interpolating the low resolution noisy pixel belief map to produce the noisy pixel belief map.

4 (currently amended). The method claimed in claim ~~1~~ 8, wherein the digital image includes two or more channels, and the step of generating a noisy pixel belief map comprises the steps of:

~~b1) providing a noise table indicating the relationship, for each channel of the digital image, between pixel intensity and expected noise magnitude;~~

~~b2)~~ calculating a signal to noise ratio for at least one pixel of the digital image, the signal to noise ratio based on: said local variance of the pixels, said ~~the~~ noise table, and said number of subsampling levels; and

~~b3)~~ computing a belief value of the noisy pixel belief map from the signal to noise ratio.

5 (original). The method claimed in claim 1, wherein the digital image is a color digital image having two or more channels and including the steps of forming a luminance channel as a weighted sum of the two or more channels; and applying the image sharpener to the luminance channel.

6 (original). The method claimed in claim 5, wherein the noisy pixel belief map is generated using weighting coefficients employed in the weighted sum.

7 (currently amended). The method claimed in claim 6, wherein the step of generating a noisy pixel belief map comprises the steps of:

~~b1)~~ providing a noise table indicating the relationship, for each channel of the digital image, between pixel intensity and expected noise magnitude;

~~b2)~~ calculating a signal to noise ratio for at least one pixel of the digital image, the signal to noise ratio based on the noise table weighted by a corresponding weighting coefficient; and

~~b3)~~ computing a belief value of the noisy pixel belief map from the signal to noise ratio.

8 (new). The method claimed in claim 2, further comprising subsampling said digital image to a predetermined number of subsampling levels.

9 (new). The method claimed in claim 1, wherein the step of generating a noisy pixel belief map comprises the steps of:

b1) creating a low resolution version of the digital image;

b2) generating a low resolution noisy pixel belief map from the low resolution version of the digital image; and

b3) interpolating the low resolution noisy pixel belief map to produce the noisy pixel belief map.

10 (new). The method claimed in claim 3, wherein said noisy pixel belief map is based upon both a local noise measure of pixels of the digital image and a noise table independent of said digital image.

11 (new). The method claimed in claim 3, wherein said local noise measure is local variance of the pixels and said noise table indicates expected variance of noise of the pixels.

12 (new). The method claimed in claim 11, further comprising subsampling said digital image to a predetermined number of subsampling levels.

13 (new). The method claimed in claim 12, wherein the digital image includes two or more channels, and the step of generating a noisy pixel belief map comprises the steps of:

calculating a signal to noise ratio for at least one pixel of the digital image, the signal to noise ratio based on: said local variance of the pixels, said noise table, and said number of subsampling levels; and

computing a belief value of the noisy pixel belief map from the signal to noise ratio.

14 (new). The method claimed in claim 3, wherein the digital image is a color digital image having two or more channels and including the steps of forming a luminance channel as a weighted sum of the two or more channels; and applying the image sharpener to the luminance channel.

15 (new). The method claimed in claim 14, wherein the noisy pixel belief map is generated using weighting coefficients employed in the weighted sum and the step of generating a noisy pixel belief map comprises the steps of:

providing a noise table indicating the relationship, for each channel of the digital image, between pixel intensity and expected noise magnitude;

calculating a signal to noise ratio for at least one pixel of the digital image, the signal to noise ratio based on the noise table weighted by a corresponding weighting coefficient; and

computing a belief value of the noisy pixel belief map from the signal to noise ratio.

16 (new). A method of sharpening a digital image having image pixels according to its noise content, comprising the steps of:

subsampling said digital image to a predetermined number of subsampling levels to provide a subsampled image;

generating a noisy pixel belief map from said subsampled image, said noisy pixel belief map being based upon a local noise measure of pixels of the digital image, a noise table separate from said digital image, and said number of subsampling levels;

using the noisy pixel belief map to vary a variable parameter of an image sharpener; and

applying said image sharpener to said digital image.

17 (new). The method claimed in claim 16, wherein said local noise measure is local variance of the pixels and said noise table indicates expected variance of noise of the pixels.

18 (new). The method claimed in claim 17, wherein said generating further comprises:

generating a low resolution noisy pixel belief map from said subsampled image; and

interpolating said low resolution noisy pixel belief map to produce said noisy pixel belief map.

19 (new). The method claimed in claim 18, wherein said noisy pixel belief map maps signal to noise ratios of pixels of the subsampled image, said signal to noise ratios being represented by the equation:

$$\mathrm{SNR}(m,n) = 1 + \mathrm{sign}[\sigma_n(m,n)^2 - \sigma_k(i(m,n))^2]\frac{\sqrt{\left|\sigma_n(m,n)^2 - \sigma_k(i(m,n))^2\right|}}{\sigma_k(i(m,n))}$$

wherein:

SNR(m,n) is the signal to noise ratio;

m,n are the coordinates of each pixel;

$\sigma_n(m,n)$ is a standard deviation of pixels of a luminance channel in a window centered on m,n, said luminance channel being a linear combination of a plurality of color channels;

*sign*[*q*] is –1 if $q < 0$, otherwise $q = 1$; and

$$\sigma_k(i(m,n)) = \frac{1}{R_f{}^R}\sqrt{\sum_{n=0}^{n=C-1} a_n{}^2(\sigma_{c_n}[c_n(m,n)])^2}$$

for each of said color channels,

wherein:

R is the number of subsampling levels;

$\sigma_{c_n}[q]$ is a standard deviation of noise at intensity $q$ for one of the color channels $c_n$;

$R_f$ is a constant.

20 (new). The method claimed in claim 19 wherein $R_f$ is 1.7 and R is less than or equal to 3.